

CONVERTS IN CHINA.

The Commander of the Monocacy Convinced That We Should Not Scoff.

RESULTS ARE IN SIGHT.

The Layman and Atheist Forced to Concede an Improvement.

IMPORTANT MATERIAL BENEFITS.

Missionaries in Palace Cars Living in Occidental Luxury.

IS THE COMMON SENSE PROPAGANDA.

[WRITTEN FOR THE DISPATCH.]

As the status of affairs on the Yangtzi has attracted the attention of civilized nations for some months past, and is likely to do so for some time to come, it may be interesting to American readers to learn the present aspect of the situation from the point of view of a naval officer detailed for the work.

It is probable that few people in the United States, no matter how much they may have read, can realize the enormous extent of the Chinese Empire, the density of its population along the coast and river banks, and the fact that the Yangtzi is a huge artery running from west to east, directly through the heart of the country, and supporting millions upon millions of human beings by its traffic and the agriculture of its rich valley.

It is doubtful if a genuine Chinese Christian with a longing for immortality will be attracted to the Yangtzi for any length of time. The Chinese as a race care nothing for the hereafter except perhaps to haunt their enemies in a spiritual form. In the Roman Catholic and very many other religions of servitude, human life is so cheap that there is almost an entire loss of individuality; the man himself sets the same small value on his life that his ruler does, and he is ready to die for the ruler as readily as he is ready to die for himself.

The River Changes Its Course. Through the broad valley the mighty river flows its way, utterly lawless as to direction, curving here and there for a number of years, and then, without warning or apparent reason, gradually eating away its own boundaries, and in the course of a few years, cutting another channel miles away from its former track. The patient farmers on the left bank, now on an island, and again on the left bank, utterly regardless apparently of the stream in some parts, and yet ever watchful of it in others, are occasionally seen on the side or the other for miles in extent. The slow, turbid stream has a velocity of from two to four miles an hour, according to the season of the year, and a difference, at Hankow, 600 miles from the sea, of 50 to 60 feet between the summer and winter height.

American Progress in China. Think of it—think of opening a port at Hankow, a city of 1,000,000 people, on the Yangtzi, to New York, and the Chinese wanted to go there and be granted a concession on which to live and trade, and to have a nucleus for the propagation of Buddhism or Confucianism! To be sure, the cases are not parallel, but in point of distance and some other things they are similar. Between Hankow and New York, the river, and Chung-King there are now five treaty ports: Chin-kiang, 100 miles; Wuhu, 200; Kinkiang, 400; Hankow, 600, and Shanghai, 1,000 miles from the sea. Now it is the most important, as it is the principal tea shipping port to England and Russia.

The Chinese expect to drive foreign commercial people out of the country by sheer business competition, and they are in a fair way to succeed, but the missionaries can not be reached in that way; their societies are now established institutions in Europe and America, and they are organized on business principles, with paid officials, and are backed up by the great body of staid, substantial citizens in all countries. The societies have large amounts of money and have extensive dealings with other great business corporations, and obtain special rates on railways, steamers, etc. The spectacle of the heathen Chinese being persecuted by missionaries and his family in a parlor car is rather startling at first sight, but analysis shows that it corresponds with the spirit of the age, and is a double-edged sword, and certainly an advantage which will bring to the country who is willing to live in this country and devote the greater part of his life to the teaching of Christianity deserves to be well cared for while he lives. All without noting the undoubted benefit that they are conferring upon the people from the standpoint of Western civilization.

The exact amount of responsibility of the great Government in the riots is difficult to determine. They are the result of the treaties binding the Government to protect foreigners, and particularly missionaries in the peaceful pursuit of their vocation, but could China realize 50 years ago the condition of affairs that exists now, the missionary clause would probably have never been adopted. It must have been adopted because China, as a nation, was not, and is not, a Christian nation, and it is not probable that this fact has any bearing on the situation.

Not Unlike Salvation Army Methods. These propagandists live in the native land, and whenever an opportunity offers at gatherings and street corners they preach the gospel after the manner of the Disciples. An advantage of this method is that any caliber of intellect can be reached, combined with faith and enthusiasm, and the lowest classes of people are reached, thus perpetuating the method by which Christianity was originally developed in Europe, viz: from the bottom upward.

Other societies believe that though the itinerant method is useful in preparing the way, the itinerants themselves do not reap the fruits of their labors; accordingly these societies establish themselves in the treaty ports, by land both in and out of the foreign concessions, build churches, schools, hospitals, and kindred institutions, and their wives and children; teach the Chinese children almost everything that is taught in the public schools, as well as the trades, and finally instill the fact that their own example as to home and family is the type to be followed, and, having educated the children in Christian faith, and then sent out as native preachers into the provinces.

An advantage of this system is that the missionaries themselves receive one of the most frequent arguments to be found in Chinese writings against the missionaries, viz: immorality. Some of these societies have abandoned the teaching of English, finding that much more has been devoted to the sciences, and also that, English taught converts were liable to leave the fold and go into business before their education was complete.

Some societies have found the lowest class of Chinese utterly unteachable as well as

the highest, and find their most successful field among the great middle class, merchants, farmers, etc. Other societies have found in the upper class—the scholars—the best teachers for native work in the provinces, and as it is the scholar class which is the most powerful enemy of Christianity, they thus carry the war directly into the enemy's country in more senses than one. Meantime, while all the systems are being tried, the number of missionaries is perceptibly increasing; even Quakers are coming out and funds are continually pouring in to carry on the work. More money was devoted to China missions alone last year, both Catholic and Protestant, than was ever before appropriated in any year for all the foreign missions combined.

The Power of Present Methods. Fourteen years ago I thought that China was a country where even the continued dripping of the water of Christianity would never wear away the stone of heathenism, but now the water is applied with steam fire engine and the principle of hydraulic mining is introduced, it is apparent to my unprejudiced mind that the stone will ultimately be forced bodily from its bed.

Of all the missions, the Roman Catholic is first in point of importance and efficiency. It is the longest established, it has the best organization, and its teachings are the result of absorption. A map of China, showing the location of its posts, appears as if it had been systematically peppered over. The objections to it on the part of the Chinese are said to be mostly due to the amount of property it holds. All the Roman Catholics, under the protection of the French Government, but both Germany and Italy are now asserting their right to take charge of their own missions. England has a growing interest in missions, and the United States comes next.

Probably a Million Converts. There are now over a thousand foreign Protestant missionaries scattered through China. Probably the number of converts in all kinds is the equivalent of 1,000,000. This is only about one-quarter of 1 per cent of the population, but the question of the number, genuine or claimed, is not of much importance as bearing upon the present situation.

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SOUND IN THE WIND.

Professor John Tyndall Explains Why You Don't Hear a Noise

WHEN A GALE BLOWS AGAINST IT.

The Air Current Deflects the Waves So They Go Over Your Head.

ELECTRIC LIGHT ABSORBED BY FOG

[WRITTEN FOR THE DISPATCH.]

It is everyone's experience that a sound can be heard better with the wind than against it. It is common to say that "the wind blows away the sound," but from experiments I made while scientific adviser of the Elder Brethren of the Trinity House, of the Board of Trade and the Board of Light House, I know that the sound is not blown away, but only deflected so it does not reach the ear.

In the year 1875, after my return from the United States, an elaborate investigation on fog signals was begun at the South Foreland. For several weeks we operated with trumpets, whistles and gongs, but on October 2nd an instrument was introduced which has continued to play an important part in fog signaling ever since, a steam siren, invented and patented by Mr. Brown (or Braun), of New York.

The following is a brief description of the apparatus: "A boiler had its steam raised to a pressure of 70 pounds to the square inch. On opening a suitable aperture this

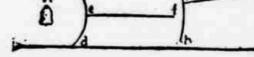


DIAGRAM SHOWING DEFLECTION OF SOUND WAVE BY WIND.

A, the bell; B, the listener; arrows indicate direction and velocity of the wind; c-d, front of sound wave at e-f; direction of sound wave from g-h; front of sound wave further deflected by wind at m-n; direction of sound wave from p-q; front of sound wave still more deflected by wind at r-s; direction of sound wave from t-u—the sound now reaching listener on ladder.

The same thing was observed with the powerful siren I have described, and the fact is one of vital importance in fog signaling. Wind may deflect the sound so a vessel near at hand may not hear it.

A great deal has been said about the loss of the Elder to the powerful electric light at St. Catharine's Point, described as the most intensely brilliant light in existence, and one which the country as a maritime nation might feel proud to see upon its shores. Contrasting the new luminary with its predecessor, the latter was described as an oil lamp of six concentric cylinders with a power of 730; while the new luminary sent forth an almost solar blaze of 7,000,000 candles. My own hopes and the enthusiasm regarding the electric light have been sobered down by experience. I knew from the first that it possessed constituents more liable to be ruined by haze and fog than those of either oil light or gas light. It is, indeed, the very waves which confer upon the electric light its peculiar whiteness and brilliancy in clear weather that are most liable to be broken up and being the first destroyed by minute suspended particles. It was, however, possible that the electric light might possess a residue of the longer waves sufficient to

render it effective as a fog light. But experiments have convinced me that electric lights are poorer than either oil or gas lights in fog because the waves of light from the electric light are more easily absorbed. JOHN TYNDALL.

AN INDIAN FAKIE'S TRICK.

After Inhaling Poisonous Fumes, He Rins a Knife Through His Tongue.

An account of the performances of the Indian Fakie, Soliman ben Aissa, is given by the Vienna correspondent of the *Lancet*. The exhibition has very properly been forbidden in public places in Vienna, but a series of private entertainments has been arranged. An aristocratic audience was present at the first of these. The fakie commenced his performances by inhaling the fumes of burnt powder prepared from extracts of snake and scorpion poisons, and by certain quick movements of the head he presented a foaming at the mouth. After these preliminaries needles and other sharp instruments were thrust through various parts of his body, including a stiletto a foot long and half an inch broad, which was thrust through his tongue. Another feat which is said to have caused great sensation consisted in pulling forward the eyeball and presenting it outside the orbit to the view of the audience between two fingers.

He was "invulnerable" also to the heat produced by a flaming torch held for a minute and a half against the under surface of his forehead. Chewing glass and playing with poisonous snakes were among his other tricks. The *Lancet* recalls the experience of the celebrated "Fire King" who many years ago created a sensation in London by advertising his power to drink prussic acid without injury to himself. The history of his exposure, sudden downfall, and subsequent malignant challenges to Mr. Wakley to fight a duel form one of the most interesting chapters in the older volumes of the *Lancet*. The *Lancet* deprecates medical men's attendance at such spectacles in any degree to such dismal spectacles.

BOUGHT ITS OWN ANSWER.

Remarkable Coincidence Concerning Two Letters That Went to Sea.

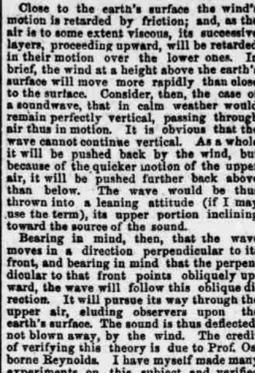
Among the stories of extraordinary coincidences, writes the London correspondent of the *Leeds Mercury*, not the least curious is the history of a letter, for the accuracy of which he can vouch. A short time ago a lady in London wished to write to a friend in America, whose address she did not know. The only means she had of procuring the address was to write to a mutual friend, who also lived in America. This she accordingly did, and the letter was duly dispatched. The ship which carried the letter was wrecked on a rocky coast, and the letter was eventually recovered and brought back to England, the letters, now much damaged by sea water, being returned through the dead letter office to the sender.

The letter in question was sent back to the lady; who naturally examined it minutely. To her surprise she found that another letter had become closely stuck to it. Holding up the twofold missive to the light, she deciphered the address on the one which was stuck to her own. It was a letter addressed to a friend in America, had had to write, and to discover whose whereabouts her own letter had been dispatched. Her letter thus literally brought back its own answer.

Value of a Lock of Hair.

The other day we referred to the Grand Old Man's locks of hair. It would be interesting to know the commercial value of these "lyart haffets." Now, we have to hand an American dealer's catalogue, in which one of the items consists of a lock of hair of Byron, Shelley, Keats and Leigh Hunt, neatly put up in paste-parture frame on a decorated card, and offered at the modest sum of \$100.

AS A TO THE



AN IMAGINATIVE ROMANCE OF ARCTIC EXPLORATION.

WRITTEN FOR THE DISPATCH BY HERBERT D. WARD.

SYNOPSIS OF PREVIOUS CHAPTERS.

In a sleeping car journeying from the West to Chicago are six chance acquaintances, Millionaire Vanderlyn, of Chicago; Prof. Wilder, inventor of the Aeropole; Sergeant Willing, who with Green and Lockwood, are technical institute student; Jack Hardy, who is going into real estate in Chicago, and Frederick Ball, an astronomical tutor. Out of a jesting remark a serious expedition to the North Pole is undertaken. The expedition is financed by Vanderlyn, furnished with money, Wilder the conveyance, Willing the experience, and the three younger men the enthusiasm. Just as they start off to the Pole, the action is brought by Hennesip, who claims the arctic is his invention.

CHAPTER III.

THE START.

The car of the "Aeropole" had been constructed especially for the needs of this expedition. It was 40 feet long and 12 broad, made of wicker work, covered with aluminum and lined with six inches of felt. There were five windows in the car, each two feet square; one on each side, one on each end and one in the floor. It was heated by a petroleum apparatus especially devised by Prof. Wilder. It was divided into three rooms. There was the dynamo or engine room, whence the ship was to be propelled and started. This was in the bow, so to speak. There was the middle or sleeping room, 15 feet long, and there was the provision room.

No dogs were to be taken on. The party did not expect to have to travel on foot in the inaccessible regions to which they were to go. Indeed, according to Melville, above the 86th latitude, dogs will be found a nuisance rather than a help. The car was designed to carry five men and their personal luggage. This totaled up 1,175 pounds; six months' food for the men, 8,160 pounds; weapons and tools, 554 pounds; scientific instruments in charge of the tutor, 6,117 pounds; a patent car-bat, a Melville sled, powder, fireworks, etc., 4,822 pounds; rope, 1,000 pounds; water, 1,000 pounds; and alcohol, 12,623 pounds; with a total of 35,418 pounds.

As the carrying capacity of the ship was more than that of the car, and in the meanwhile was added a further ballast of water, alcohol, etc., that brought the grand total up to 54,000 pounds. The "Aeropole," for such was the christened, was now able to keep for two months on the wing, with provisions for at least six months for five men on liberal rations. Above the car was a platform of observation raised off and reached from the interior. Here the sledge and the boat were lashed. The car itself was built to float, so that in case of accident she could be easily detached and used as a miniature life-boat.

On the night whose morning broke the 1st of July every man of the five adventurers had slept within the three-acre inclosure, while several men gazed at the vessel of the air. Ugly rumors had got about, and yet, up to this morning, Prof. Wilder had not been very anxious. Two days before, the board covering that protected the huge airship from sight had been taken down, and the enemies of the plucky inventor, ever hovering about the place, trying to spy out his designs and to serve treachery, made up their minds as to what they would do. A final trial must be made or their bird would soon fly. For three months Hennesip had vainly endeavored to serve that injunction, and in the meanwhile he had been hastening the construction of an airship from the same lines and design, in order to prove his title before the courts. Backed by Mr. Vanderlyn, Prof. Wilder had gained some hot preliminary judicial skirmishes, and things looked hopeful up to the time of this forcible, illegal attack. The early train brought 20 special officers, whose instructions were to stop the work undertaken by Professor Wilder, if not to destroy the completed wonder.

"Open in the name of the law of Illinois!" shouted the leader of the gang again, as he battered at the bolted, oak gate that protected the polar expedition. Five minutes left! It was 8 o'clock in the morning. The crew held an immediate consultation with the foreman of the machine shop. Through minute peep holes they could see that the crowd was determined. A hundred roughs and sixteenth had gathered. Any act of violence seemed possible.

"Why on earth can't we cast off and let her go?" asked Jack Hardy. He seemed in nowise troubled, and had already envisioned himself in the car by the window

THIS PAPER CLAIMS CIRCULATION OF 64,000 TO-DAY.

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Prof. John Tyndall.

Dresden fire which had been presented to the House of Commons, a few of the Elder Brethren went to the South Foreland with a view of determining whether a steam siren would be substituted for the trumpet. The air in this new instrument was compressed by an air engine. There may have been grounds cogent with the Elder Brethren for the adoption of this latter. Be that as it may, although the pressure attained by the air engine did not approach that attained by the steam engine, and although the range of observation from the station was not so great as that of the steam siren, it was recommended that the instrument with which all our experiments had been made, and upon which all our knowledge has been founded, and the establishment of the air siren at all points of our coasts where such instruments were required.

Effect of Wind on Sound.

During the South Foreland investigation, whenever the wind was too strong to permit of our going to sea, we turned our forced leisure to account by making upon land observations on the action of the wind. Two parties of observers, one on the windward and the other to leeward, noting as they went their observations of the sounds. It was by no means uncommon to find the range to leeward five, six or seven times that to windward. Indeed, there were times when, if circumstances had permitted the observations to be made, the range to leeward probably have been found ten or fifteen times that to windward.

Everybody knows that sound is propagated in waves. The point which the reader has not to bear in mind is that a sound-wave always moves in a direction perpendicular to the front of the wave. If the front be vertical, the wave will move in a horizontal direction. If through any cause the wave be made to lean backward or forward, the perpendicular will point obliquely upward or downward, and the motion of the wave will be in the same direction. In perfectly calm weather we may suppose a portion of a wave from a distant source to be making the range to leeward its surface. As long as the weather continues calm the wave will move in a horizontal di-

rection. But let us suppose a wind to blow in opposition to the direction of the sound. How a Sound Wave is Deflected. Close to the earth's surface the wind's motion is retarded by friction; and, as the air is to some extent viscous, its successive layers, proceeding upward, will be retarded in their motion over the lower ones. In brief, the wind at a height above the earth's surface will move more rapidly than close to the surface. Consider, then, the case of a sound-wave, that in calm weather would remain perfectly vertical, passing through the air in its motion. If the wind be thus thrown into a leaning attitude (if I may use the term), its upper portion inclining toward the source of the sound. Bearing in mind, then, that the wave moves in a direction perpendicular to its front, and bearing in mind that the perpendicular to that front points obliquely upward, the wave will follow this oblique direction. It will pursue its way through the upper air, slanting observers upon the earth's surface. The sound is thus deflected, not blown away, by the wind. The credit of verifying this theory is due to Prof. Osborne Reynolds. I have myself made many experiments on this subject, and verified the results of Prof. Reynolds' theory. The use of a ladder placed on Wimbledon Common I was enabled to raise my head to a height of 12 feet above the ground. The hammer of the bell that I employed was adjusted by a spring, so that the stroke should always have the same value. Carrying the bell along the ground to windward, a point was as length attained at which an observer placed on the ground at the foot of the ladder heard nothing. On ascending the ladder the deflected waves were recovered, the sound becoming distinctly audible.



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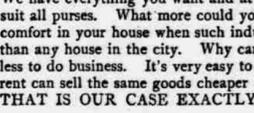
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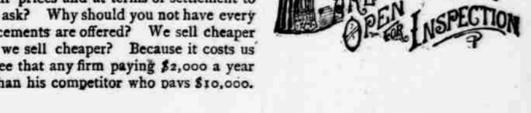
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